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by

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Conspicuous Consumption and Race: Evidence from South Africa*

Wolfhard Kaus†

Abstract

A century ago, Thorstein Veblen introduced socially contingent consumption into the economic literature. This paper complements the scarce empirical literature by testing his conjecture on South African household data and finds that Black and Coloured households spend relatively more on visible consumption than comparable White households. In an emerging economy context, this is especially important as it carries implications for spending on future assets. This paper explores whether the differences in visible expenditures can be explained with a signaling model of status seeking. Among Black households, spending on visible consumption is found to change predictably with different reference group incomes.

Keywords: Conspicuous consumption, Signaling, Status, South Africa

JEL classification: D12, D83, J15, O12

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1 Introduction

It is usually observed that expenditure patterns differ across as well as within countries. A large body of theoretical and empirical contributions to demand theory explains these differences in terms of variation in relative prices and income (see, e.g., Blundell (1988) for a survey and Selvanathan and Selvanathan (1993, 2004) for more empirical applications). An important assumption of this approach holds that the utility functions, and thus the underlying preferences, are similar. Nevertheless, anecdotal evidence shows that even at a given point in time and within the same country, some groups seem to spend more on certain types of goods. In a recent study Charles, Hurst, and Roussanov (2009) explore such a particularity as they empirically access the differences in spending on conspicuous consumption across races. They study U.S. household spending on "visible consumption" using the Consumer Expenditure Survey (CES) database, an ongoing rotating panel data set, for the period 1986 to 2002. Visible consumption is defined in terms of consumption items "that are readily observable in anonymous social interactions, and that are portable across those interactions" (ibid p. 426). Moreover, consuming more of these goods should signal "better economic circumstances" (ibid p. 431). In line with anecdotal evidence, Charles, Hurst, and Roussanov (2009) find a significant difference in spending patterns across races. After controlling for differences in permanent income and demographics, Blacks and Hispanics spend about 30 percent more on visible consumption than Whites.[1] As visible consumption belongs to the realm of conspicuous consumption, it is straightforward to assume that the difference in spending is (at least to some extent) explained by social interactions with one's reference group. Accordingly, Charles, Hurst, and Roussanov (2009) use a signaling model of status seeking to explain the observed phenomenon. Using this approach, the authors show that the statistically significant difference in visible consumption vanishes after they control for mean reference group income. The results suggest that the initially found differences can be explained by differences in the social environment. To be consistent with the assumption of similar utility functions, these findings should hold not only across but also within social groups. Even for each race separately, the two hypotheses can be confirmed for the case of the U.S.

In light of the above, it would be especially useful to extend the analysis by Charles, Hurst, and Roussanov (2009) to less affluent countries for at least two reasons. First, if individuals spend relatively more on visible consumption, (sooner or later) they will have to spend relatively less on other consumption categories. This will be particularly relevant if individuals among comparably less affluent groups spend more on visible consumption, because it might bear implications for their capacity to catch up to higher income levels. Charles, Hurst, and Roussanov (2009) show that on average Black and Hispanic households seem to spend less on education, health, and food. Accordingly, if spending on visible consumption crowds out spending on future assets among households with less affluent reference groups in a high income country like the U.S., a similar finding in a less affluent country might carry implications for our understanding of poverty. Second, testing the predictions of the signaling model of status seeking in a less affluent and economically more unequal country offers

[1] The households are referred to as Black, Hispanic, Coloured, or White if the head of the household has reported one of these categories as her social affiliation.

a more challenging environment for the underlying assumption of similar utility functions across different social groups. As South Africa consists of social groups with different cultural backgrounds, showing different income distributions across groups and high inequality within groups, this country appears to be exceptionally suited as a field of study.

This paper first assesses differences in spending on visible consumption across social groups in South Africa. Indeed, Coloured and Black households, whose mean income is much less than that of White households, are found to spend on average about 35 to 50 percent more on visible consumption than comparable White households. It is furthermore tested whether the differences in spending on visible consumption can be explained by a model that incorporates socially contingent concerns for status. In line with the predictions of the signaling model of status seeking, the reference group's mean income (as a proxy for social environment) is found to account for the difference in visible expenditures. However, it is concluded that socially contingent differential spending on visible consumption cannot be confirmed for each group separately. The different results for the South African subpopulations point to the fact that different groups may develop different ways to express their relative position within a society. Second, the paper assesses whether the importance of positional concerns changes with income. With rising income, a higher share of visible consumption expenditures is found to be socially contingent among the Black population. Overall, the paper contributes additional evidence for the existence of socially contingent consumption behavior as described by Veblen (1899). To the author's knowledge, this is the first paper that shows the validity of this behavior and assesses the extent of social contingency using consumer expenditure data in a less affluent country context.[2]

The remainder of the paper is organized as follows. The next section reviews the related literature on conspicuous consumption and outlines the signaling model of status seeking as well as its predictions. Section 2 introduces the data set and definitions used in the paper. In section 3, the between group differences in visible expenditures are assessed and the suitability of the signaling status model in explaining the between group differences as a socially contingent phenomenon is tested. The fourth and last section summarizes the results and concludes.

2 Related Literature and Model Predictions

Veblen (1899) was one of the first economists to systematically introduce status considerations into economic theory. Fundamental to his "Theory of the leisure class" is the assumption that individuals compare each other on the basis of their economic achievements. Moreover, he emphasized that these interpersonal comparisons are important for human behavior as they constitute the individual's recognition by others. As, according to Veblen (1899, p. 24f.), esteem by fellow human beings is the basis for self-respect, missing recognition by them would lower the individual's self-assessment. To satisfy the need for self-respect, individuals aim to have at least as much as their own reference group. To be noticed

[2]This is not to disregard earlier works on certain facets of conspicuous consumption. See, e.g., Bloch, Rao, and Desai (2004) regarding spending on wedding celebrations as a means to signal status in rural India.

by others and to satisfy the desire for social recognition, individuals show their wealth to others. As wealth is usually unobserved, Veblen (1899) identifies two different ways to demonstrate one's position in society. One variant is conspicuous leisure such as demonstratively engaging in everything but productive work. The second variant investigated here is conspicuous consumption, where visible consumption of certain goods, signaling a higher position in interpersonal exchanges, is used to demonstrate one's status.

The type of behavior sketched so far may give rise to certain dynamics within a society. If individuals from lower income groups aspire to the living standard of higher income groups, the demand for the relevant goods increases. Higher income groups, however, have an incentive to distinguish themselves from lower income groups and thus direct their expenditures to more visible goods. Furthermore, Veblen (1899) infers that conspicuous consumption is even more important as social cohesion decreases and mobility rises. The more anonymous and the more frequent individuals interactions with others are, the more conspicuous consumption matters as a means to signal one's relative position. In more narrow economic terms, conspicuous consumption can be framed as an economic externality. A broad range of economic works have focused on economic implications and possible policy recommendations with regard to such an externality (see, e.g., Duesenberry 1949, Frank 1985, Bagwell and Bernheim 1996, Glazer and Konrad 1996, Cowan, Cowan, and Swann 1997).[3]

While Veblens work was rich in illustrating manifold facets of status-seeking behavior, the present paper takes a more narrow approach to positional concerns by investigating spending on highly visible goods suited to signal one's usually unobserved wealth. The basic idea has been elaborated in different signaling status models (Ireland 1994, Cole, Mailath, and Postlewaite 1995, Glazer and Konrad 1996, Corneo and Jeanne 1998, to mention a few). In accordance with such models, Charles, Hurst, and Roussanov (2009) derive a simple signaling framework for empirically investigating visible consumption. In their model, individuals belong to certain reference groups whose income distribution is known. Individually unobserved income is spent on an observable and an unobservable good. Utility is derived from spending on both kinds of goods as well as status, which is society's inference about an individual's income. Status is defined as the expected value of an individual's income given her observable spending on conspicuous consumption and the group she belongs to. Under the assumption that individuals maximize utility with respect to their budget constraint and society's beliefs about an individual's income, Charles, Hurst, and Roussanov (2009) derive the following predictions:

- Spending on conspicuous consumption increases with own income.
- If average group income rises, spending on conspicuous consumption decreases.

For the present analysis the second prediction is particularly relevant as it incorporates the group's income distribution as a socially contingent factor, explaining the level of visible consumption. The intuition behind the second prediction can be formulated as follows. Among comparable households, those living in a more affluent environment have a relatively less favorable position within their

[3]The importance of relative status has also been demonstrated in the context of subjective well-being; see, e.g., Dynan and Ravina (2007).

reference group. They should therefore spend relatively less on visible consumption.

If this conjecture is correct, it should be possible to show that any particularities in visible consumption across social groups vanish, or at least diminish, when the reference group's average income is controlled for. Moreover, as the underlying signaling model of status seeking assumes the similarity of utility functions across groups, differential spending patterns on visible consumption should be observed within and across social groups.

3 Data and Definitions

The data used in this paper have been collected by Statistics South Africa (StatsSA). In the years 1995, 2000, and 2005, an income and expenditure survey (IES) was conducted. It contains information on sources of incomes as well as on the purchase of a wide variety of goods and services (Orkin 1997). Designed to cover a representative sample of South African households, the sample size consists of 29,582 households in 1995, 26,263 in 2000, and 21,144 in 2005, respectively.

Working with the data raises two problems. First, the structure of the IES 2005 series differs from preceding surveys (Yu 2008). Second, it has occasionally been questioned whether the IES of 2000 meets a fully representative standard (see, e.g., Burger, van der Berg, and Nieftagodien 2004, van der Berg, Louw, and Yu 2008). Regarding the first problem, the classification of expenditure items was changed from the Standard Trade Classification to the UN Statistics Division's Classification of Individual Consumption According to Purpose (COICOP) in 2005. Moreover, the data collection methodology changed from recall to diary method. Besides these differences, *imputed rent* has been introduced as a new item. To account for these changes, some adjustments are necessary.[4] The second problem concerns mainly procedural weaknesses of the 2000 IES sample. Due to migration between the 1996 census and the collection of IES data for 2000, the survey is known to overrepresent the Black population while underrepresenting the White population (Özler 2007).[5]

The summary statistics in Table 1 clearly show the huge differences in income and total expenditures across subgroups. On average, Black households

[4]The income and expenditure items compiled in 1995 and 2000 were recategorized according to the COICOP structure. Furthermore, the 2005 values of income, *housing & utilities* as well as total expenditures have to be corrected for the value of *imputed rent* to be comparable to prior IES series. Although the change of methods from recall to diary method may also diminish comparability, von Fintel (2007) finds no systematic change in estimating income elasticities of aggregated product categories that can be attributed to the change in methodology.

[5]Additionally, a higher share of zero values in food expenditures as well as greater differences between total income and total expenditures have been found. In accordance with a suggestion by Özler (2007), the 2000 sample was reweighted to match up with the population shares in the 2001 census. Burger, van der Berg, and Nieftagodien (2004) use different methods to correct for the observed IES 2000 deficiencies. Their results show surprising robustness in parameter estimates, especially for more aggregated and less frequently purchased product categories. The adjustments made and the results by Burger, van der Berg, and Nieftagodien (2004) have encouraged the author to cautiously analyze the pooled data. To check the robustness of the results, all regressions in the paper were rerun without the IES 2000 data. Although the magnitude of some coefficients changed slightly, none of the results rely on the inclusion of the IES 2000 data.

Table 1: Summary Sample Statistics

	Black	Coloured	White	Full
Education < 12 years	0.84	0.82	0.27	0.75
Completed secondary school	0.15	0.16	0.54	0.21
Education: degree	0.01	0.02	0.19	0.04
Total expenditures	23,951	41,005	121,913	40,369
Total income	31,701	56,991	183,965	56,584
Age	46.2	46.1	47.6	46.4
Household size	4.2	4.3	2.8	4
Sample size	54,164	8,916	9,083	72,163

Notes: The data consists of all three Income and Expenditure Surveys (IES) conducted by StatsSA. The sample includes households with household heads aged between 18 and 100 years. Due to limited sample size, Asians, Indians, and other minorities have been excluded. Moreover, the sample is restricted to the 99th percentile of the total expenditure distribution of each subgroup within each year. Two percent of the sample are omitted due to missing values in the education variable. All amounts are given in 2005 South African Rand. The figures denote survey weighted mean values.

in the sample have only slightly more than half of the overall population's average income, which approximately corresponds to the average income of Coloured households. However, the mean income of White households is more than three times higher than the overall average income. In line with previous findings (cf. Armstrong, Lekezwa, and Siebrits 2008, van der Berg, Louw, and Yu 2008, Özler 2007), the data reflects a high degree of inequality across subgroups.[6] The kernel densities of total annual expenditures for Black, Coloured, and White households in Figure A1 visualize the differences and skewness of the respective distributions. In addition, the summary statistics show large differences in education levels. Most of the Black and Coloured household heads did not finish secondary school, whereas this is not the case for White household heads. Last, average household size differs significantly between White (three members) and Black and Coloured households (four members).

As the household's reference group will be defined on the basis of South Africa's provinces, some characteristics of the latter should also be noted. Since 1994, South Africa has consisted of nine rather heterogeneous provinces. They differ in population size, average income, proportions of area type as well as the composition of social groups. In 1995, almost two thirds of the Black population lived in rural areas (Orkin 1997). Among the Coloured and White populations, this is only true for 16 and 9 percent, respectively. Moreover, almost the entire Coloured population lives mostly in two provinces (Western Cape & Northern Cape), where it makes up the majority. White and Black populations can be found in every province.[7]

In accordance with Charles, Hurst, and Roussanov (2009), reference groups are defined by social affiliation and regional proximity. Hence the assumption

[6]Note, furthermore, that the majority of the sample can be perceived as relatively poor. More than 40 percent of the individuals within the sample live on less than the lower-bound poverty line as defined by StatsSA (Yu 2008).

[7]Table A1 provides an overview of the populations distribution across provinces. A comparison of South African census estimates in 2001 (StatsSA 2009) and the figures of the pooled sample show that the composition of social groups within and across the nine provinces is quite accurately represented by the sample described in Table 1.

is that Blacks (Coloureds, Whites) compare themselves only to other Blacks (Coloureds, Whites). It is further assumed that these reference groups can be defined at a provincial level. For the inference of one's income in anonymous interactions, it is thus necessary to know one's social affiliation and place of residence. Given the fact that most social interactions take place in the individuals residential environment, it is straightforward to assume that this kind of knowledge is available to the observer. The arguably rough definition of reference groups is claimed to be justified by two reasons. Even after apartheid, it has been recognized that race is still an important factor in social interactions in South Africa. This has been shown in several areas like the labor market, the education system as well as residential environments (see, e.g., Rospaba 2002, Moodley and Adam 2000). Further evidence is provided by a representative survey of the Institute for Justice and Reconciliation, which shows that levels of interracial contact remain low (IJR 2010). About one quarter of the respondents report to have no verbal contacts with other groups in daily life. Even more, about 50 percent, never socialize with individuals from different groups. The second reason, which may justify the broad definition of reference groups, is related to the goods considered. In contrast to luxuries such as big TV sets or costly tableware, which are visible only to a narrow peer group, this paper concentrates on conspicuous consumption goods that are portable and easily observable in anonymous interactions (as defined in the first section under the term visible consumption). Therefore it is claimed that a more narrowly defined reference group would need much more specific assumptions and, accordingly, also a different model.

The classification of what is perceived to be visible consumption is an empirical task. For the U.S., Heffetz (2007) as well as Charles, Hurst, and Roussanov (2009) conducted a survey for this purpose. Whereas the telephone survey conducted by Heffetz (2007) was a random sample of the U.S. population over 18 years, the survey by Charles, Hurst, and Roussanov (2009) was made among business students of the University of Chicago. According to the students' opinions, spending on apparel, accessories, such as watches and jewelry, personal care, and vehicles, are the most visible signs of better economic circumstances in anonymous interactions. In Heffetz's survey, among the readily observable goods, cigarettes, cars, clothing, and jewelry are ranked highest in terms of visibility. Thus, both surveys show quite similar results. For South Africa such a survey is unfortunately not available. In this paper, a similar classification to that for the U.S. is used. The visible consumption basket as defined by Charles, Hurst, and Roussanov (2009) is not explicitly restricted to particular products. Each item represents a category which may correspond to different products and services in the U.S. and South Africa. However, spending on these categories may still serve as a means to convey information about one's status. Despite other functional aspects served by these items, it would be hard to maintain that goods which constitute outward appearance do not send any signals about the economic status of a person in South Africa. It could, of course, be the case that these signals are less important. If so, no systematic differences in spending on the visible consumption basket should be found or explained by the signaling status model.

4 Empirical Investigation

This section starts out by assessing the differences in visible expenditures across social groups. The following subsection tests the predictions of the signaling model of status seeking outlined in section 2. Furthermore, the degrees of social contingency are estimated.

4.1 Assessing the differences

To begin with, spending on visible consumption is compared across social groups. Therefore log spending on the pooled basket of visible goods and services Vis_i is regressed on group dummies indicating a household as being Black Bl_i or Coloured Col_i, the log of a household's permanent income $pInc_i$, a vector of demographic indicators $\mathbf{Dem_i}$, i.e., area type, age, age squared, and family size as well as a vector of year dummies $\mathbf{Yr_i}$. The corresponding regression can be formulated as follows:

$$ln(Vis_i) = \beta_0 + \beta_1 * Bl_i + \beta_2 * Col_i + \gamma * ln(pInc_i) + \delta * \mathbf{Dem_i} + \epsilon * \mathbf{Yr_i} + \varepsilon_\mathbf{i}. \quad (1)$$

Permanent income is usually measured by total expenditure. In like circumstances, the measure is perceived as being more suitable than income as it allows to account for realized total expenditures that are larger or lower than actual income, making total expenditures a smoother measure of income. Note, furthermore, that the log-log formulation of the regression equation allows to interpret its coefficient γ as (permanent) income elasticity of visible consumption expenditures. However, the permanent income measure does not come without flaws. Charles, Hurst, and Roussanov (2009) point to the fact that total expenditures are an endogenous variable to any components of total expenditures. Measurement errors in these components may, moreover, translate into measurement errors in the composite. Hence the log of total expenditures needs to be instrumented. In a first approach, a set of instruments is applied, which is as close as possible to the specification of Charles, Hurst, and Roussanov (2009), which, in turn, is a vector of current and permanent income controls. The set contains a dummy for positive current income, log of current income, the level of current income, a cubic in the level of current income as well as dummies for three different levels of education (below secondary school, finished secondary school, degree).[8] In a second approach, the education variables are excluded from the instruments. Since age and family size are assumed to directly influence spending on visible consumption, it appears to be straightforward to assume that education might also directly influence the dependent variable. Accordingly, the set of education variables is used as predictor variables in the second approach. Tests of the statistical validity of different sets of instruments suggest a specification with log of current income as a single instrument.[9]

In Table 2, the differences between White, Black, and Coloured households are explored sequentially. Specification I estimates the unconditional differences

[8] To exactly match the authors specification, a series of one-digit industry and occupation codes would also have to be included. This kind of data is unfortunately not available.

[9] Although F-stats and partial R^2 on all instrument sets are sufficient, the large sample demands cautiousness. In the second approach, the result of the weak identification test exceeds the Stock and Yogo (2005) critical values by far. This provides additional evidence against weak-instrument concerns.

Table 2: Differences in Log Visible Spending

Controls included	Black		Coloured	
(I) No controls	-1.53***		-0.99***	
R^2=0.10	(0.04)		(0.05)	
(II) Current income controls	0.06		0.11**	
R^2=0.34	(0.04)		(0.04)	
(III) Log total expenditure	0.56***		0.41***	
R^2=0.47	(0.03)		(0.03)	
(IV) IV specifications	0.60***	0.63***	0.44***	0.47***
R^2=0.47 R^2=0.47	(0.04)	(0.04)	(0.03)	(0.03)
(V) Spez. IV plus time dummies	0.62***	0.67***	0.46***	0.49***
R^2=0.48 R^2=0.48	(0.04)	(0.04)	(0.03)	(0.03)
(VI) Spez. V plus demographics	0.50***	0.54***	0.33***	0.35***
R^2=0.49 R^2=0.49	(0.04)	(0.04)	(0.04)	(0.04)

Notes: The regressions use the full sample described in Table 1. Robust standard errors, clustered at PSU level, are indicated in parentheses. *** Significant at the 0.1 percent level. ** Significant at the 1 percent level. * Significant at the 5 percent level.

in spending on visible consumption without any controls. On average, White households spend more on visible consumption than Black or Coloured households. These estimates comply with the first prediction of the signaling status model. As White households are, on average, much more affluent than Black and Coloured households, they should spend a higher level of their income on visible consumption. The introduction of current income variables in specification II distinctively changes the results, i.e., both the sign and magnitude of the coefficient change. The coefficients in specification III change further upwards after permanent income measure, log of total expenditure is introduced. , Black and Coloured households spend about 56 respectively 41 percent more on visible consumption than White households with comparable income. Note further that the fit of the regression increases from R^2 of 0.10 in specification I to 0.47. Specification IV uses the instrumental variable approaches outlined above. It offers two coefficients for each group, the first denoting the coefficient of the former approach and the second denoting the coefficient of the latter. Compared with the former specifications, the results change only slightly upwards. After year dummies are additionally included in specification V, the coefficients increase again. Adding demographic controls in specification VI corrects the figures downwards by about 12 percentage points. A comparison of the two different instrumental variable approaches in specifications IV to VI reveals only slight differences in coefficients. In the remainder of the paper, the second approach is maintained.[10]

Although unreported in Table 2, demographic controls show significant effects. While age and education are found to decrease spending on visible consumption, the coefficients for household size show positive signs. Only area type does not yield any significant effect. The effect of education and age are found to be comparatively large. Holding a degree as compared to having either completed secondary school or below secondary school education reduces the gap in visible expenditures by about 50 percent. The same reduction in the visible

[10]While the second approach deviates from the specification by Charles, Hurst, and Roussanov (2009), none of the results rely on the use of the second approach. Robustness checks using the first approach show no qualitative changes in the coefficients of interest.

spending gap can be found for households with heads older than 55 as compared to younger than 35. Moreover, within the regression the coefficient for log total expenditures γ is larger than one (1.32). As γ represents the income elasticity, the visible consumption basket represents luxury goods and services.[11] The luxury property implies that with increasing income relatively more is spent on visible consumption, which again confirms the first prediction of the signaling model.

Overall, the first results in Table 2 indicate partial parallels to the findings in the U.S., where the households of Black and Hispanic minorities spend 23 to 26 percent more on visible consumption than White households with comparable income and demographic backgrounds. Similarly, a gap in visible consumption spending can be found in South Africa, where Black households, which constitute the majority of the overall population, spend about 50 percent more on visible consumption than their White counterparts. These figures are substantial in absolute terms. Given that average spending of White households on visible consumption is about 21,932 Rand a year (see Table A3), the above result implies that comparable Black households, on average, spend 10,966 Rand more on visible consumption per year.

A closer examination of visible consumption components reveals a fairly consistent picture (see panel A in Table A4). Although the coefficients for particular components differ in size, they uniformly show positive differences. A negative coefficient can only be found for *cars*.[12] However, its magnitude is negligible. The same pattern holds if only car owners are considered (panel B of Table A4). Overall, the differences are most pronounced for *clothing* and *footwear*, followed by *jewelry* and *personal care*.

When Black and Coloured households spend relatively more on visible consumption than comparable White households, they have to spend less on other product categories. This relationship is further explored in Table 3, which shows differences in log spending on all other product categories.[13] The categories are chosen according to the broad categories reported by the IESs. After excluding visible consumption goods and merging the categories *restaurants & hotels* and *recreation & culture*, results for the remaining ten categories are reported in Table 3. In line with the findings of Charles, Hurst, and Roussanov (2009), most of the coefficients show negative signs. More specifically, Black and Coloured households spend less on *health & medical services*, *housing & utilities*, *recreation & culture/ restaurants & hotels*, and *communication*. Only the coefficients for *food* and *miscellaneous goods & services* are consistently and significantly positive for Black and Coloured households. Although it might be tempting to emphasize the positive difference in spending on *education* for Black households, the reader is advised to be cautious in this respect for two reasons. While it is possible to control for household size, the data does not allow to properly control for the number of children within the household. Moreover, *education* is the only expenditure category which reports a much higher rate of zero values

[11] Note that this is not true for each of the product categories alone. At least *cars* and *jewelry* show γ values lower than one for Black and Coloured households. However, as can be seen in Table A2, the percentage of households with positive spending in these categories does not exceed 20 percent of the overall sample.

[12] Note that Black households which are car owners constitute less than two percent of the Black sample.

[13] A more detailed composition of the consumption categories can be found in Table A5.

Table 3: Differences in Log Expenditure Categories

Expenditure category	Black	Coloured
Alcohol & tobacco^T	-1.44***	0.39***
	(0.08)	(0.08)
Communication^T	-0.84***	-1.17***
	(0.08)	(0.07)
Education^T	0.60***	-0.13
	(0.06)	(0.07)
Food	0.10***	0.21***
	(0.03)	(0.03)
Furnishings & household equipment	0.40***	0.07
	(0.06)	(0.06)
Health & medical services^T	-0.61***	-0.85***
	(0.07)	(0.07)
Housing & utilities	-0.73***	-0.24***
	(0.05)	(0.05)
Miscellaneous goods & services^T	0.94***	0.90***
	(0.07)	(0.08)
Recreation & culture/ restaurants & hotels^T	-0.14*	-0.12*
	(0.06)	(0.06)
Transportation	0.75***	-0.35***
	(0.07)	(0.08)

Notes: The specification of the regressions is similar to specification IV of Table 2. Only categories which are labeled with^T are estimated using Tobit regressions due to a nontrivial fraction of zeros. Coefficients then denote marginal effects. Robust standard errors, clustered at PSU level, are indicated in parentheses. *** Significant at the 0.1 percent level. ** Significant at the 1 percent level. * Significant at the 5 percent level.

for White households as compared to remaining households in the sample (see Table A3).

4.2 Explaining the differences

In this subsection, it is tested whether the differences in spending on visible consumption can be explained by the signaling model outlined in section 2. The second prediction, *If average group income rises, spending on conspicuous consumption decreases*, is of special interest here because it incorporates the group's income distribution as a socially contingent factor explaining the level of visible consumption. Among comparable households, which differ only with respect to their mean group income, those living in a more affluent environment have a relatively less favorable position within their reference group and should therefore spend relatively less on visible consumption. To maintain the underlying assumption of similar utility functions across groups, this should be true not only across social groups but also within each group. Moreover, the results of the second prediction are explored in more detail to disentangle the socially contingent and the autonomous shares of visible consumption.

To test the second prediction, the following regression is estimated separately

Table 4: Within-Group Differences in Log Visible Expenditures

Controls	(I)	(II)
Log mean group income (Black)	-0.26***	
	(0.06)	
Log mean group income (White)		0.10
		(0.13)

Notes: The regressions use the full sample described in Table 1. Specifications I and II are similar to specification VI in Table 1 except for the omission of group dummies and the introduction of log mean own group income. Specifications I and II are estimated separately by subgroups. Robust standard errors, clustered at PSU level, are indicated in parentheses. *** Significant at the 0.1 percent level. ** Significant at the 1 percent level. * Significant at the 5 percent level.

for Black and White households:[14]

$$ln(Vis_i) = \beta_0 + \alpha * ln(Inc^{\mu}_{k,t}) + \gamma * ln(pInc_i) + \delta * \mathbf{Dem_i} + \epsilon * \mathbf{Yr_i} + \zeta_\mathbf{i}, \quad (2)$$

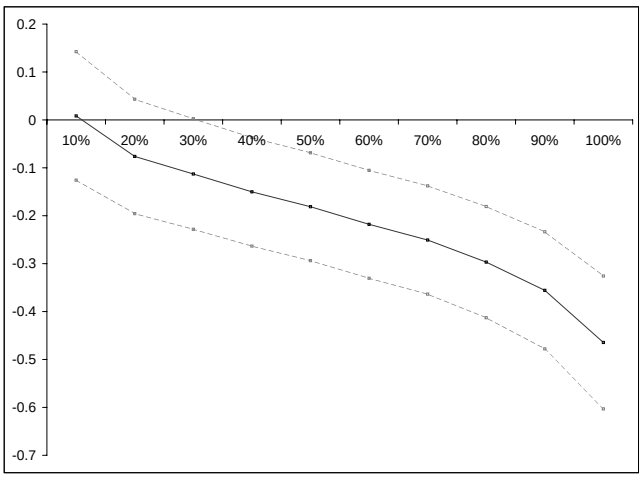
where k refers to one of 27 provinces/race units and $Inc^{\mu}_{k,t}$ denotes the average income of a certain group in one of the nine provinces in a certain year.

The results in Table 4 confirm the second prediction only partially. The negative coefficient in specification I of Table 4 complies with the prediction. Its value of -0.26 implies that if mean group income doubles, the expenditures on visible consumption decrease by 26 percent. Thus, on average, about one quarter of the expenditures on the visible consumption basket turns out to be socially contingent. The same coefficient estimated for White households (specification II) does not comply with the second prediction as it fails to show any significant negative effect. Accordingly, the conjecture that, independent of social group affiliation, spending on visible consumption is a general means to signal status cannot be confirmed. The results thus challenge the assumption of similar utility functions. However, this is not to deny any social contingency among White households. Two explanations may apply here. Either for historical reasons Whites do have no need to signal status at all, or they simply use different means to signal their relative position within their reference group. Both explanations would be in line with Mason (1998), who acknowledges different status-related behavior between old-established wealthy individuals and those whose income has increased only recently.

Thus far, the results confirm the social contingency hypothesis at least for Blacks, who make up the largest share of the South African population. However, although such an effect could be found on average, it is unclear whether its magnitude is evenly distributed. In fact, one could argue that the magnitude may be more pronounced among the poorest households. This would amount to claiming that relatively poor households are more inclined to care about status which would, in turn, translate into higher socially contingent shares of visible consumption. It is thus explored whether the former effect systematically changes across the income distribution of the Black population. Using the partitioning approach (see, e.g., Yip and Tsang 2007), regression (2) is rerun with

[14] A separate regression for Coloured households is omitted as the skewed distribution of Coloureds across provinces (see Table A1) does not allow to obtain reliable estimates of mean group income for most provinces.

Figure 1: Social Contingency in Visible Consumption Expenditures



Notes: The upper and lower lines denote the 95 percent confidence interval of the estimated effect (middle line) of mean group income on visible consumption for different deciles of Black households permanent income.

interaction terms connecting mean reference group income, and ten mutually exclusive and exhaustive decile dummies, indicating the households position in the permanent income distribution. More accurately, the coefficient of mean reference group income (-0.26) is partitioned across ten permanent income decile dummies.[15] The partitioned coefficients are shown in Figure 1. On the x-axis, the chart depicts permanent income in ten deciles. The y-axis depicts the effect of mean reference group income on visible consumption expenditures. The solid line connects the ten separate coefficients. Except for the two poorest deciles, the estimates are highly significant. It is obvious from Figure 1 that the magnitude of the coefficients, which can be read as the socially contingent shares of visible consumption, increases with income. If, *ceteris paribus*, mean reference group income doubles, wealthy households reduce spending on visible consumption more than twice as much as households in the 5th decile. In contrast to the hypothetical claim above, Figure 1 supports the opposite. In fact, the coefficient for the poorest deciles is small and insignificant. The results indicate that the autonomous share of visible consumption decreases with income, while the socially contingent share increases. This finding is in line with theoretical predictions as well as empirical findings of the subjective well-being literature, which hypothesizes that positional concerns are positively correlated with absolute levels of income (of a country) (Clark, Frijters, and Shields 2008, Akay, Martinsson, and Medhin 2009). Thus, one might be tempted to conclude that in the case of Black South Africans, the desire for status, and hence for recognition, increases with income.

Overall, the finding described in the previous paragraph makes an even

[15]To straightforwardly interpret the results, mean reference group income has to be omitted from the right-hand side of regression (2).

Table 5: Differences in Log Visible Expenditures

Controls	(I)	(II)
Black dummy	0.54***	0.08
	(0.04)	(0.09)
Coloured dummy	0.35***	0.01
	(0.04)	(0.06)
Log mean own group income		-0.29***
		(0.05)

Notes: The regressions use the full sample described in Table 1. Specification I is similar to specification VI in Table 2. Specification II additionally includes the log of mean reference group income. Robust standard errors, clustered at PSU level, are indicated in parentheses. *** Significant at the 0.1 percent level. ** Significant at the 1 percent level. * Significant at the 5 percent level.

stronger case for the suitability of the signaling status model in tracing social contingencies in consumption expenditures. Although the socially contingent share in visible consumption increases with income, the different incentives to consume conspicuously seem to explain that, at every level of income, Black households spend relatively more on visible consumption than comparable White households.

To complete the analysis, one remaining implication of the signaling status model is tested. If concerns for status determine spending on visible consumption, the differences in spending should vanish, or at least diminish, after the reference group's average income is controlled for. Table 5 contrasts the results of specification VI in Table 2 with results of a similar regression that includes mean reference group income as an additional control variable. The group variables in the second specifications show a striking difference. The coefficient for Coloured as well as for Black households drops sharply and loses significance. Moreover, the coefficient of mean reference group income is clearly significant and negative.[16] Concerns for status thus appear to be an important factor in explaining differential spending on visible consumption across social groups.

5 Conclusion

South African society is characterized by huge differences within and between social groups. This paper examines only a very small part of these differences, namely those in the spending on a particular consumption category by social groups. It is shown that Coloureds and Blacks spend between 30 to 50 percent more on a basket of visible consumption goods and services than comparable Whites. This finding is especially enlightening because the partly socially contingent expenditures on visible consumption among Black and Coloured households, which are on average much less affluent than White ones, imply lower spending on other consumption categories. Regarding the data under consideration, lower expenditures on *health & medical services* are the most remarkable.

In the empirical analysis, it is tested whether the differences in spending on

[16] Robustness checks reveal that no alternative measure of reference group income, such as the overall province average or the provincial mean of a certain group alone, is able to invalidate the group dummies.

visible consumption can be explained by a signaling model that incorporates socially contingent concerns for status. Under the assumption that status-related expenditures depend on the relative position within the own reference group, the influence of mean reference group income on group differences in visible spending is tested. In line with the predictions of the signaling model, the reference group's mean income is found to account for these differences. Having a more favorable position within the own reference group, i.e., having a less affluent reference group than comparable households, may thus explain higher visible spending of Black and Coloured households.

Counter to the model's assumptions, differential spending on visible consumption cannot be confirmed for each group separately. Although the expectations are confirmed for the largest share of the population, socially contingent spending on visible consumption is not observable within the White population. This indicates that among White South Africans, visible consumption appears to be a less viable sign of their economic position. However, this finding does not deny any social contingency among White South Africans. Most probably it is only the signaling channels that differ from those of U.S. Americans or Black South Africans. Nevertheless, the different results for South African subpopulations point to the fact that different groups may develop different ways to express their relative position within a society. Therefore it may not always be justified to assume similar utility functions across different groups.

Moreover, the paper has assessed whether the importance of status considerations changes with income. As spending on visible consumption is found to be a rather poor proxy to capture status-related consumption among Whites, the analysis is restricted to the Black subpopulation. With rising income, a higher share of visible consumption expenditures is found to be socially contingent. This finding indicates steady differences in the importance of status, and therefore the desire for recognition with rising income. The overall results confirm the importance of Veblen's concept of socially contingent status considerations in an economically emerging country.

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A Appendix

Table A1: Population Statistics in South African Provinces

	Population share	Share Black	Share Coloured	Share White
Eastern Cape	0.14	0.88/0.84	0.07/0.07	0.05/0.09
Free State	0.06	0.88/0.81	0.03/0.03	0.09/0.16
Gauteng	0.20	0.74/0.71	0.04/0.03	0.20/0.26
KwaZulu-Natal	0.21	0.85/0.87	0.02/0.02	0.05/0.10
Limpopo	0.12	0.97/0.97	0.00/0.00	0.02/0.03
Mpumalanga	0.07	0.92/0.89	0.01/0.01	0.07/0.11
Northern Cape	0.02	0.36/0.41	0.52/0.42	0.12/0.17
North West	0.08	0.92/0.88	0.02/0.02	0.07/0.10
Western Cape	0.10	0.27/0.24	0.54/0.47	0.18/0.30
National	1	0.79/0.76	0.09/0.08	0.10/0.15

Notes: The figures before the slash denote official 2001 census numbers (StatsSA 2009). The figures after the slash refer to survey weighted statistics form the pooled sample described in Table 1.

Table A2: Visible Consumption Summary Statistics by Subgroups

Subcategory	All	Black	Coloured	White
Personal care	1,172	807	1,326	2,907
	0.87	0.86	0.92	0.93
	0.036	0.037	0.036	0.029
Apparel (incl. footwear)	2,469	2,031	2,895	4,420
	0.89	0.88	0.90	0.92
	0.076	0.084	0.069	0.038
Jewelry	114	59	107	395
	0.20	0.19	0.18	0.26
	0.002	0.002	0.002	0.003
Cars	2,662	461	1,621	14,210
	0.05	0.02	0.06	0.22
	0.015	0.006	0.015	0.060
Sample	72,163	54,164	8,916	9,083

Notes: In the first row of each expenditure category, the table shows survey weighted mean consumption levels in 2005 South African Rand. The second line depicts the share of households with positive spending in the respective categories. The expenditure shares are given in the third row.

Table A3: Summary Statistics of Expenditure Categories by Subgroups

Expenditure category	All	Black	Coloured	White
Visible consumption	6,417	3,357	5,949	21,932
	0.98	0.98	0.99	0.99
	0.128	0.129	0.122	0.129
Alcohol & tobacco	850	525	1,405	2,170
	0.47	0.41	0.68	0.62
	0.027	0.027	0.042	0.022
Communication	1,471	655	1,540	5,499
	0.69	0.65	0.67	0.93
	0.028	0.023	0.031	0.048
Education	957	541	712	3,162
	0.50	0.53	0.49	0.35
	0.017	0.016	0.013	0.023
Food	9,373	3,831	6,144	8,720
	1	0.99	1	1
	0.357	0.390	0.364	0.189
Furnishings & household equipment	3,544	2,251	2,823	10,386
	0.96	0.96	0.97	0.97
	0.078	0.078	0.063	0.081
Health & medical services	1,940	699	1,580	8,327
	0.73	0.69	0.75	0.93
	0.028	0.020	0.025	0.067
Housing & utilities	5,131	2,625	6,052	17,129
	0.97	0.97	0.98	0.99
	0.135	0.123	0.169	0.179
Miscellaneous goods & services	4,273	2,475	3,279	13,779
	0.76	0.72	0.83	0.95
	0.074	0.072	0.063	0.094
Recreation & culture/ restaurants & hotels	2,896	1,294	2,469	11,118
	0.79	0.74	0.84	0.98
	0.051	0.046	0.047	0.080
Transportation	3,518	2,137	3,243	10,553
	0.85	0.84	0.77	0.93
	0.076	0.075	0.061	0.088
Sample	72,163	54,164	8,916	9,083

Notes: In the first row of each expenditure category, the table shows survey weighted mean consumption levels in 2005 South African Rand. The second line depicts the share of households with positive spending in the respective categories. The expenditure shares are given in the third row.

Table A4: Differences in Log Spending on Visible Consumption by Subcategories

Visible consumption	A: Full sample		B: Automobile owners (#3292)	
subcategory	Black	Coloured	Black (#961)	Coloured (#453)
Personal care	0.22**	0.33**	0.10	0.51**
	(0.09)	(0.10)	(0.21)	(0.17)
Clothing	1.46***	1.01***	0.56	0.56*
	(0.07)	(0.07)	(0.36)	(0.25)
Footwear	1.48***	1.11***	0.26	0.25
	(0.08)	(0.09)	(0.40)	(0.31)
Jewelry^T	0.61***	0.54***	0.95***	0.27
	(0.03)	(0.06)	(0.27)	(0.25)
Cars^T	-0.02***	0.001	-0.02	0.01
	(0.005)	(0.004)	(0.10)	(0.13)
Apparel incl. jewelry	1.41***	0.94***	0.55*	0.46*
	(0.06)	(0.07)	(0.26)	(0.21)

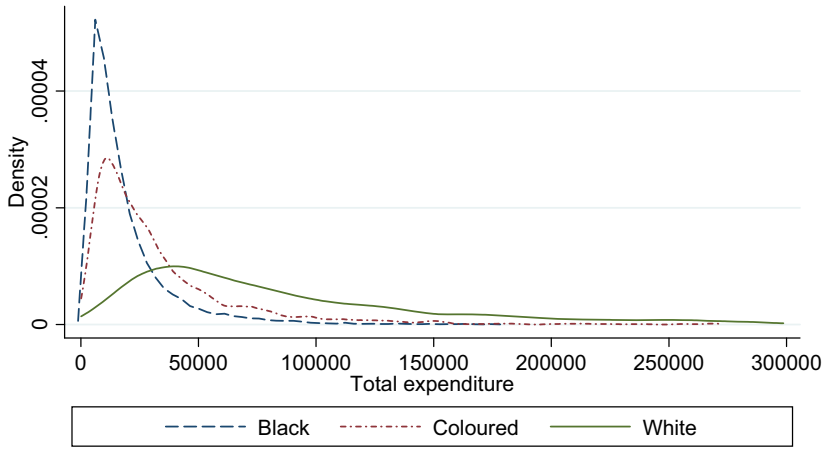
Notes: The specification of the regressions is similar to specification VI of Table 2. Only categories which are labeled with^T are estimated using Tobit regressions due to a nontrivial fraction of zeros. Coefficients then denote marginal effects. Panel A consists of the whole sample. Panel B is restricted to households with positive spending on the purchase of new or used cars. As Tobit regression naturally cannot be run for *cars* in panel B, the coefficients denote OLS results. Robust standard errors, clustered at PSU level, are indicated in parentheses. *** Significant at the 0.1 percent level. ** Significant at the 1 percent level. * Significant at the 5 percent level.

Table A5: Expenditure Categories

Expenditure category	Description
Visible consumption	Personal care (hairdressing, appliances & products)
	Jewelry (jewelry, clocks, and watches)
	Clothing & footwear (incl. related services)
	Cars (new and used cars excl. maintenance)
Alcohol & tobacco	Spirits, wine, beer, tobacco
Communication	Postal services, telephone & fax
Education	Expenses on primary, secondary, tertiary, and other education
Food	All kinds of food and nonalcoholic beverages consumed at home
Furnishings & household equipment	Furnishings, carpets, electrical appliances, glass/tableware, maintenance of dwelling, related services
Health & medical services	Pharmaceutical & therapeutical products/equipment; medical & dental services, health insurance, medical aid subscriptions
Housing & utilities	Rentals, electricity, water, gas, other fuels, sewerage
Miscellaneous goods & services	Insurances (excl. health), social protection services, financial services, other unspecified expenditures
Recreation & culture	Recreation equipment & services, cultural services, holidays
Restaurants & hotels	Beverages, meals, accommodation
Transportation	Services by air, rail, road, waterways; car maintenance

Notes: The expenditure categories are defined according to the broadest categories used in the IES. There are two exceptions to this rule. First, visible consumption goods are excluded from the former category to rule out double counting. Second, expenses on health insurance and medical aid subscriptions are reallocated from *miscellaneous goods & services* to *health and medical services.*

Figure A1: Kernel Densities of Annual Total Expenditures



Notes: The samples used are the same as described in Table 1. To preserve clarity, the sample of White households is restricted to its 95th percentile. Amounts are given in 2005 South African Rand.